

# WOAH Reference Laboratory Reports Activities 2023

## Activities in 2023

This report has been submitted : 15 juillet 2024 13:57

### Laboratory Information

<b>Name of disease (or topic) for which you are a designated WOA Reference Laboratory:</b>	Bovine Viral Diarrhoea
<b>Address of laboratory:</b>	APHA, Weybridge
<b>Tel.:</b>	07869000212
<b>E-mail address:</b>	amin.asfor@apha.gov.uk
<b>Website:</b>	<a href="http://apha.defra.gov.uk/apha-scientific/services/biological-reagents/bvd.htm">http://apha.defra.gov.uk/apha-scientific/services/biological-reagents/bvd.htm</a>
<b>Name (including Title) of Head of Laboratory (Responsible Official):</b>	Dr Amin Asfor
<b>Name (including Title and Position) of WOA Reference Expert:</b>	Dr Rebecca Strong
<b>Which of the following defines your laboratory? Check all that apply:</b>	Governmental Research agency

### TOR1: DIAGNOSTIC METHODS

1. Did your laboratory perform diagnostic tests for the specified disease/topic for purposes such as disease diagnosis, screening of animals for export, surveillance, etc.?  
(Not for quality control, proficiency testing or staff training)

Yes

Diagnostic Test	Indicated in WOA Manual (Yes/No)	Total number of test performed last year	
		Nationally	Internationally
<b>Indirect diagnostic tests</b>			
Antibody ELISA (serum)		4436	36
BVD antibodies in bulk milk		24	0
<b>Direct diagnostic tests</b>			
BVD virus isolation - semen		117	0
BVD virus isolation - tissues - 2 passages		13	0
Erns Antigen ELISA (BVD)		4253	10
PCR for Border disease in tissue or heparinised blood		1244	0
RT-PCR BVD (bulk milk)		100	0
RT-PCR BVD (whole blood or tissues)		1407	0
Border disease virus in pooled sera samples		12	0
BVD virus in blood RT-PCR		37	0
BVD Ag ELISA ear notch samples		14	0
BVD antibodies in individual milk		1	0
Serum neutralisation (BD)		14056	0
Serum neutralisation (BVD)		55	0

Serum neutralisation (differential)		1	0
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## TOR2: REFERENCE MATERIAL

2. Did your laboratory produce or supply imported standard reference reagents officially recognised by WOA?H?

No

3. Did your laboratory supply standard reference reagents (nonWOAH-approved) and/or other diagnostic reagents to WOA?H Members?

Yes

TYPE OF REAGENT AVAILABLE	RELATED DIAGNOSTIC TEST	PRODUCED/ PROVIDE	AMOUNT SUPPLIED NATIONALLY (ML, MG)	AMOUNT SUPPLIED INTERNATIONALLY (ML, MG)	NO. OF RECIPIENT WOA?H MEMBER COUNTRIES	COUNTRY OF RECIPIENTS
WB160 mAb	BVDV1/BDV detection	14	0	14	4	CHINESE TAIPEI, FRANCE, GERMANY, ITALY,
WB103/105 mAb	Pan pesti virus detection	29	4	25	6	BELGIUM, ITALY, NEW ZEALAND, SPAIN,
WB162 mAb	BVDV1 Detection	0	0	9	5	AUSTRALIA, CHILE, FRANCE, GERMANY,
WB210 mAb	BVDV1 detection	41	0	41	4	GERMANY, SOUTH AFRICA, SPAIN,
WB215 mAb	BVDV1 detection	3	0	3	3	CHINA (PEOPLE'S REP. OF), SPAIN, SWITZERLAND,
WS363 mAb	BDV detection	4	0	4	3	FRANCE, GERMANY, SPAIN,
WS433 mAb	BVDV2/BDV detection	9	0	9	3	BELGIUM, GERMANY, SPAIN,
BVDV mAb mix – WB103/ WB112/ WB116/ WB214	Pan pesti virus detection	7	0	7	3	THE NETHERLANDS - ARUBA, AUSTRALIA, SWITZERLAND,
WB112 mAb	BVDV detection	101	0	101	4	GERMANY, THE NETHERLANDS, UNITED KINGDOM, UNITED STATES OF AMERICA,
WB166 mAb	BVDV-1/BDV detection	1	0	1	1	CHINA (PEOPLE'S REP. OF),
WB214 mAb	BVDV-1 detection	4	0	4	2	CHINA (PEOPLE'S REP. OF), SPAIN,
WS538 mAb	BVDV-2 detection	6	0	6	4	AUSTRALIA, CHINA (PEOPLE'S REP. OF), ITALY, SPAIN,

4. Did your laboratory produce vaccines?

No

5. Did your laboratory supply vaccines to WOA?H Members?

No

## TOR3: NEW PROCEDURES

6. Did your laboratory develop new diagnostic methods for the designated pathogen or disease?

No

7. Did your laboratory validate diagnostic methods according to WOA?H Standards for the designated pathogen or disease?

Yes

NAME OF THE NEW TEST OR DIAGNOSTIC METHOD DEVELOPED	DESCRIPTION AND REFERENCES (PUBLICATION, WEBSITE, ETC.)
Internal Validation of IDEXX total antibody kit to be used with goats' sera	Available upon request

8. Did your laboratory develop new vaccines for the designated pathogen or disease?

No

9. Did your laboratory validate vaccines according to WOAHS Standards for the designated pathogen or disease?

No

**TOR4: DIAGNOSTIC TESTING FACILITIES**

10. Did your laboratory carry out diagnostic testing for other WOAHS Members?

Yes

NAME OF WOAHS MEMBER COUNTRY SEEKING ASSISTANCE	DATE	WHICH DIAGNOSTIC TEST USED	NO. SAMPLES RECEIVED FOR PROVISION OF DIAGNOSTIC SUPPORT	NO. SAMPLES RECEIVED FOR PROVISION OF CONFIRMATORY DIAGNOSES
UNITED KINGDOM	2023-01-02	Antibody ELISA (serum)	27	0
CYPRUS	2023-02-28	Antibody ELISA (serum)	7	0
IRELAND	2023-06-30	Antibody ELISA (serum)	2	0
UNITED KINGDOM	2023-07-31	Erns Antigen ELISA (BVD)	8	0
IRELAND	2023-12-20	Erns Antigen ELISA (BVD)	2	0

11. Did your laboratory provide expert advice in technical consultancies on the request of an WOAHS Member?

Yes

NAME OF THE WOAHS MEMBER COUNTRY RECEIVING A TECHNICAL CONSULTANCY	PURPOSE	HOW THE ADVICE WAS PROVIDED
CANADA	Advise on the use of Total Ab ELISA test. Along side the SNT	Email

**TOR5: COLLABORATIVE SCIENTIFIC AND TECHNICAL STUDIES**

12. Did your laboratory participate in international scientific studies in collaboration with WOAHS Members other than the own?

Yes

Title of the study	Duration	PURPOSE OF THE STUDY	PARTNERS (INSTITUTIONS)	WOAHS MEMBER COUNTRIES INVOLVED OTHER THAN YOUR COUNTRY
Methodological advancements on interlaboratory diagnostic test evaluation	12month	1. Create an international collaborative network of laboratory experts and epidemiologists to: a. Exchange expertise and experience on test evaluation; b. Facilitate future sample exchange between partner institutes. c. Move towards a harmonization of diagnostic tools and analytical strategies for test evaluation across Europe. 2. Providing estimates of diagnostic sensitivity and specificity for assays currently used in France, Sweden, the UK, and the Netherlands to detect the presence of BVD.	Arianna Comin (SVA) Viktor Ahlberg (SVA) Matt Denwood (UCPH) Guy Kouokam (ANSES) Stephen Valas (ANSES) Eduardo de Freitas Costa (WBVR) Michel Counotte (WBVR) Aldo Dekker (WBVR) Akbar Dastjerdi (APHA) Amin Asfor (APHA) Mark Arnold (APHA) Rachel Jinks (APHA)	DENMARK FRANCE SWEDEN THE NETHERLANDS

13. In exercising your activities, have you identified any regulatory research needs\* relevant for WOAHS?

Yes

**Research need : 1**

**Please type the Research need:** - Bulls may rarely have a prolonged and persistent testicular infection with BVDV and excrete virus in semen for prolonged periods. These bulls are seropositive while having the ability to shed the virus in the semen. The policy which regulates semen export to European countries needs clarification especially in cases where the bull is seroconverted or in cases where bulls are BVD antibody positive in ELISA but negative in SNT. The current EU bovine semen testing regulations for seropositive/vaccinated bulls on stud is not clear and requires further clarification.

**Relevance for WOA** Disease Control,

**Relevance for the Codes or Manual** Manual,

**Field** Epidemiology and Surveillance, Diagnostics, Vaccines,

**Animal Category** Terrestrial,

**Disease:**

Bovine viral diarrhoea

**Kind of disease (Zoonosis, Transboundary diseases)**

**If any, please specify relevance for Codes or Manual, chapter and title**

(e.g. Terrestrial Manual Chapter 2.3.5 - Minimum requirements for aseptic production in vaccine manufacture)

*Answer:*

**Notes:**

*Answer:*

## TOR6: EPIZOOLOGICAL DATA

14. Did your Laboratory collect epidemiological data relevant to international disease control?

Yes

IF THE ANSWER IS YES, PLEASE PROVIDE DETAILS OF THE DATA COLLECTED:

Testing serum samples from ~130000 sheep and goats to understand the epidemiological status of BVD and border disease in sheep and goats in England

15. Did your laboratory disseminate epidemiological data that had been processed and analysed?

No

16. What method of dissemination of information is most often used by your laboratory? (Indicate in the appropriate box the number by category and list the details in the box)

a) Articles published in peer-reviewed journals:

0

b) International conferences:

0

c) National conferences:

0

d) Other (Provide website address or link to appropriate information):

0

## TOR7: SCIENTIFIC AND TECHNICAL TRAINING

17. Did your laboratory provide scientific and technical training to laboratory personnel from other WOA Members?

No

## TOR8: QUALITY ASSURANCE

18. Does your laboratory have a Quality Management System?

Yes

Quality management system adopted	Certificate scan (PDF, JPG, PNG format)	
ISO9001	PDF	ISO 9001 Certificate.pdf
ISO1725	PDF	ISO17025 Certificate.pdf

19. Is your quality management system accredited?

Yes

Test for which your laboratory is accredited	Accreditation body
Bovine viral diarrhoea - virus isolation from semen	UKAS
Bovine viral diarrhoea (Erns) antigen - cattle > 30 days old	UKAS
Bovine viral diarrhoea antibodies in bulk milk	UKAS
Bovine viral diarrhoea (Erns) antigen ELISA for ear notch tissue samples	UKAS

20. Does your laboratory maintain a "biorisk management system" for the pathogen and the disease concerned?

Yes

APHA maintains a complete and functioning laboratory biological risk management system, which ensures that the laboratory is in compliance with applicable local, national (UK Health and Safety Executive), regional, and international standards and requirements for biosafety and laboratory biosecurity.

## TOR9: SCIENTIFIC MEETINGS

21. Did your laboratory organise scientific meetings related to the pathogen in question on behalf of WOA?H?

No

22. Did your laboratory participate in scientific meetings related to the pathogen in question on behalf of WOA?H?

No

## TOR10: NETWORK WITH WOA?H REFERENCE LABORATORIES

23. Did your laboratory exchange information with other WOA?H Reference Laboratories designated for the same pathogen or disease?

Yes

24. Do you network (collaborate or share information) with other WOA?H Reference Laboratories designated for the same pathogen?

No

25. Did you organise or participate in inter-laboratory proficiency tests with WOA?H Reference Laboratories designated for the same pathogen?

Yes

PURPOSE OF THE PROFICIENCY TESTS: 1	ROLE OF YOUR REFERENCE LABORATORY (ORGANISER/ PARTICIPANT)	NO. PARTICIPANTS	PARTICIPATING WOA?H REF. LABS/ ORGANISING WOA?H REF. LAB.
BVD bulk milk	Organiser	29	Americas- 1 Asia + Pacific- 3 Europe- 25
BVD serum	Organiser	45	Africa- 2 Asia + Pacific- 1 Europe- 41 Middle East- 1
BVD Ear tissue Ag ELISA	Organiser	17	Asia + Pacific- 1 Europe- 16
BVD bulk milk PCR	Organiser	11	Americas- 1 Asia + Pacific- 1 Europe- 9
BVD Ear tissue PCR	Organiser	27	Africa- 1 Americas- 1 Asia + Pacific- 2 Europe- 21 Middle East- 2

26. Did your laboratory collaborate with other WOA?H Reference Laboratories for the same disease on scientific research projects for the diagnosis or control of the pathogen of interest?

Yes

TITLE OF THE PROJECT OR CONTRACT	SCOPE	NAME(S) OF RELEVANT WOA?H REFERENCE LABORATORIES
Assessment of the correlation between the commercially available BVDV Ab tests and the gold standard SNT	Compare between the ELISA test results and the SNT for BVDV1, Differential SNT (BVDV and BDV)	National reference Laboratory ANCES-France

## TOR11: OTHER INTERLABORATORY PROFICIENCY TESTING

27. Did your laboratory organise or participate in inter-laboratory proficiency tests with laboratories other than WOA?H Reference Laboratories for the same pathogen?

Yes

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Purpose for inter-laboratory test comparisons <sup>1</sup>	Role of your reference laboratory (organizer/participant)	No. participating laboratories	Name of the Test	WOAH Member Countries
Compare the proficiency of total Ab ELISA kits from different laboratories	Participant	5	total Ab ELISA kits	DENMARK, FRANCE, SWEDEN, THE NETHERLANDS, UNITED KINGDOM,

## TOR12: EXPERT CONSULTANTS

28. Did your laboratory place expert consultants at the disposal of WOAHP?

Yes

KIND OF CONSULTANCY	Location	SUBJECT (FACULTATIVE)
Expert Group to discuss WOAHP Terrestrial Manual chapters review	remote	BVDV
Expert Group to review the case definition for bovine viral diarrhoea	Email	BVDV

29. Additional comments regarding your report:

No

N/A